

Transit + Streets First

A lower-cost, multimodal approach to post-Viaduct mobility
Offered by the People's Waterfront Coalition

Seattle City Council
Viaduct Committee of the Whole
April 24, 2006

Future Mobility

Past and Future Approaches

In 1953, the Viaduct began its life as part of the primary North South highway corridor from Vancouver to Portland, routing traffic through the city. This early highway was a reasonable response to the new need to accommodate the emerging car culture, and its location made sense in light of the blighted condition of this mostly un-beloved land.

Today Seattle leaders have to answer a different set of questions about our future mobility.

1. How do we integrate planning for future growth and future mobility in a way that will improve, not worsen, the traffic situation?
2. How do we spend funds responsibly so that transportation needs are met city-wide and region-wide?
3. How do we improve the resilience of our city's economy given the ever-rising costs of gasoline?
4. How do we ensure crucial freight mobility does not find itself overwhelmed by personal travel?
5. How do we apply the recommendations of the Green Ribbon Commission to meet our commitment to the Kyoto Protocol?
6. How do we take best advantage of the economic, civic, and ecological potential of the downtown shore?

We propose today that repeating the choice of 1953, whether below ground with a partial tunnel or above ground with a larger aerial, is no longer a proper answer to the more complicated challenge Seattle leaders face.

Seattle's Goals and Future Vision

Seattle's Comprehensive Plan says:

"Make the best use of the streets we have to move people and goods." And

"To reduce car use, the City will employ land use policies and parking strategies that encourage increased use of transit, walking, biking, and carpooling." And

“Mode choice goal for downtown in 2020 is 85% non-SOV mode for all trips.”

Seattle Connections (part of the Seattle Transit Plan) says:

“As our neighborhoods grow, we need to provide a range of convenient, frequent, and reliable alternatives to the car.” And

“In the next phase, we expect funding to expand frequent transit service to 24 major transportation corridors through street upgrades that keep transit out of traffic congestion.”

PSRC Destination 2030 says:

“The region’s ambitious, long-range growth management and transportation goals depend heavily on providing more and better public transit services over the next 30 years. Moving from today’s region that is largely auto dependent to a region where numerous travel options are available and attractive will require additional investment in public transportation.”

The Green Ribbon Commission Report says:

“Driving fewer cars and fewer miles is critical to meeting our Kyoto target.”

The newly adopted downtown zoning plan says:

“The proposal has major environmental benefits: reducing sprawl in the region by encouraging residential growth in the urban center where infrastructure exists; encouraging housing near transit so people can live without cars; and improving the air we breathe by reducing automobile pollution.”

Building a replacement segment of highway in this location and investing billions in a car-centric, business-as-usual approach to mobility may counter Seattle’s aims to transition to a less car-dependent future. In a time when Seattle leaders are working hard to reduce demand for car trips and shift travel to other modes, spending billions to maintain this highway’s capacity may slow progress in the direction leaders are going.

How Do We Decide Future Travel Demand?

Future travel demand for urban car trips is pretty elastic, and dependent on many factors:

- The availability, reliability, and convenience of transit
- The availability and convenience of accessible roads
- The price of fuel
- The price of parking
- The price of tolls, if any
- The viability of walking or biking alternatives
- Social preferences for lifestyle and location
- And most importantly, density and development patterns.

There are currently 105,000 trips a day on the viaduct. Here's what we know about them:

- The origins and destinations are quite dispersed
- More than 80% of the trips start and end within Seattle City limits; the viaduct is used primarily for in-city trips
- Roughly 40% are driving into or out of downtown, and are already in the street grid downtown for some part of their trip
- SR-99 traffic volumes are highest on the viaduct itself, and drop quickly north and south of downtown
- Roughly 4% of the trips are trucks, a typical percentage for any freight arterial
- The Port of Seattle rarely uses the viaduct for container movement; fuel transport to BINMIC is about 80 trips a day
- Typically, 75% of trips – and even 50% at peak hour -- are not work related.

Many assumptions about serving demand and future travel behavior are imbedded in the planning model used to predict future demand and justify the highway investment, and should be examined. For instance:

- **Shift to Transit:** How many trips are assumed to shift to the new proposed Bus Rapid Transit (BRT) on SR-99, to the proposed BRT to Ballard, to the proposed BRT to West Seattle? How many trips are assumed to shift to future Sound Transit light rail? If none, why not?
- **New Travel Patterns:** When capacity is reduced in a system, studies show that typically 25% of the former trips stop happening. Instead of sitting in congested traffic, people take transit, chain trips, reschedule trips, avoid unnecessary trips, make more effort to carpool, etc. If the viaduct is planned to be closed for 2-4 years, is future travel demand extrapolated from the new travel patterns that citizens will have already settled into during this period? If not, why not?
- **Fuel Prices:** Demand for oil worldwide is likely increasing more quickly than supply, and economists are consistently predicting significant fuel price increases. What range of potential future fuel prices were tested in the demand model? If only inflation was assumed, why?
- **Reducing Emissions:** Seattle has pledged to reduce green house gas emissions by 2012, and experts identified reducing car use as the key priority. What goals for reduced car use were assumed in the demand model? What set of incentives and disincentives were tested – tolling, parking taxes, congestion pricing, transit passes, etc? If demand management strategies weren't included, why not?
- **Denser, more walkable future:** Seattle's new zoning changes are expected to improve the jobs / housing balance in downtown and other neighborhoods, create more compact communities, and shift many car trips to walking and biking modes. How is this reduced future demand for car trips reflected in assumptions? If it isn't, why not?

The Transit + Streets First Approach

The goals of the Transit + Streets First approach are to:

- Reclaim Seattle's downtown shore to best capture the civic, economic, and ecological potential of that public land
- Reroute through-traffic away from the shore by improving the effectiveness of the larger transportation system
- Make transportation investments that move toward Seattle's future vision.

Traffic

Instead of building a new segment of highway to replace the viaduct, our proposal aims to accommodate 70% to 80% of the current 105,000 trips with 4 strategies:

1. Improve the efficiency of the street grid and shift through-trips there
2. Construct a 4 lane surface Alaskan Way for trip volumes like 1st Ave
3. Improve transit service to maximize transit usage
4. Improve freight mobility

Improve Efficiency of the Street Grid

Redistribute 25,000 to 40,000 trips

- Actual usage to capacity ratios in Seattle's comprehensive plan identify a high degree of underused capacity on existing streets, many with 25% to 40% available. Creating uninterrupted north south routes on these streets can help make this capacity available. Creating a more robust grid can better balance traffic flow through offering drivers multiple alternative routes for each trip.
- The Central City Access Strategy and the forthcoming Traffic Management Plan for Viaduct Construction Closure identify specific measures to remove bottlenecks and route traffic better to where this capacity already exists.
- These plans, which are being developed by City traffic engineers, describe measures to distribute trips off SR-99 north and south of downtown, dispersing trips onto several different improved north/south options. North of downtown, potential streets include Dexter, 6th, and 9th. South of downtown the distributor requires enhanced access to and from Spokane Street, and improved routing to Airport Way S., 6th Ave, S. 4th Ave S., and Alaskan Way S.
- Effective computer control of signal timing and improved management of turning movement can allow 10-15% more through-put on existing streets
- The future I-5 repaving project provides an additional leverage opportunity to incorporate strategies that improve flow so more through trips can be shifted there.

Construct a 4 lane Alaskan Way Surface Street

Absorb 15,000 trips

- Design a pedestrian friendly surface street on the eastern side of available land, with access to piers and sidewalks and pedestrian crossings at every intersection.
- Better connect this street to the grid with more intersections at east-west streets. Plan to accommodate 25,000 trips/day there (similar to First Ave) to optimize

pedestrian and bike friendliness and provide sufficient local access for destinations and businesses.

- We propose this street should remain along the waterfront, not climb the current viaduct route to the Battery Street tunnel; routing options need further analysis.

Improve Transit Convenience and Reliability

Shift 20,000 to 30,000 trips

- Leverage future plans for Bus Rapid Transit on 3 key routes: Aurora Ave North, Ballard to downtown, and West Seattle to downtown
- Consider other additional transit service, if appropriate, such as street cars or pedestrian ferries
- Consider stronger measures to prioritize pedestrian, transit, bike and freight use of streets over private vehicle use
- Sound Transit bus tunnel service will be open to use by the time the viaduct comes down. Shift additional trips to this capacity coming on-line
- Third Ave, currently closed to cars at peak hours, could remain in this configuration as a bus corridor if necessary for providing adequate transit service.

Invest in Freight Mobility

The Freight Mobility Strategic Action Plan identifies strategies to keep freight moving throughout the city; distribution trucks serve the businesses in every neighborhood. The Transit + Streets First proposal suggests investing in measures to give trucks priority use of freight arterials with the intent to maximize reliability of the freight trips on key corridors. Freight only lanes, freight priority access to and use of streets at certain times of day, improved signage and route information, opening HOV lanes to freight, and reconfiguring the express lanes for freight and transit are all potential approaches. In addition, the improved access needed by the Port of Seattle to I-5 and I-90 via Atlantic and Royal Brougham can happen with this proposal.

Future Growth

Growth in trips is much more dependent on land use development patterns, density and availability of other modes than it is on population growth. When Vancouver's West End was developed to improve the jobs and housing balance, the number of trips didn't increase in proportion to 50% population growth, it fell. Once the neighborhood became dense enough, many trips shifted to walking and biking and transit modes.

We propose that further investing in creating walkable neighborhoods and transit convenience can absorb the bulk of future growth. These ideas are in the conceptual stage, and need to be further analyzed.

Seattle Strand: Seawall, Waterfront Park, and Urban Design

Whatever transportation solution is chosen, the seawall must still be repaired and replaced. However, with no underground highway to work around, a functional shore ecology can be designed for optimal healthy interaction between surface and ground water, uplands, and several new beaches. The seawall design can be rethought to maximize creation of intertidal habitat, maximize human access to the water, and

integrate surface water management into a healthy shore ecology. Given the experience of the Olympic Sculpture Park and their softer / simpler seawall design, this approach may offer significant potential cost savings over a vertical, hard armored seawall/tunnel wall and the complex subsurface storm water engineering it requires.

We propose that by shifting through trips away from this land, and building a modest four-lane urban street, broad opportunities are opened up for creating a great civic and recreational destination on the downtown waterfront. New beaches in appropriate locations, event spaces, pocket parks, recreation facilities, and new destinations can all be developed over time, eventually fulfilling this site's potential as the green heart of a dense mixed-use downtown. A new ecological + urban waterfront park and Pike Place Market together can anchor Seattle as an international destination for tourism.

Is the Transit + Streets First Proposal Viable?

Case Studies

There are several examples from around the world of reducing highway capacity and employing incentives / disincentives to reduce demand for car trips. Generally, state Departments of Transportation have opposed these approaches. In some cases cities or local governments have decided to pursue the approach without endorsement from the state governments.

While no other city is like Seattle, and no other city has done exactly this proposal, these examples indicate that each part of the Transit + Streets proposal has worked effectively in real-world traffic systems.

- Portland successfully removed Harbor Drive, a 6-lane waterfront highway, with no negative traffic effects, despite predictions of gridlock by many local transportation planners.
- San Francisco citizens twice voted no on initiatives to remove the Embarcadero, thinking traffic would be far worse without it. After it was damaged in an earthquake, they realized traffic wasn't so bad, the waterfront was great, and decided not to replace it. An estimated 40% of the trips that had used it previously stopped happening, and 30% shifted to transit. They liked the results so much they did it again, replacing the damaged Central Freeway with a surface boulevard with about half the capacity.
- Chattanooga removed a 2.5 mile stretch of grade-separated, limited access federal highway, and in its place built a 4-lane boulevard (Chattanooga Riverfront Parkway) on their riverfront. The project was approved by federal officials in 2000, and is now completed. This new boulevard offers less capacity, and is better connected to the grid so trips can be dispersed. It is lauded as a great success, and credited with transforming quality of life and revitalizing their urban economy.

- In the 1970s New York replaced the elevated west side highway with a reduced capacity surface boulevard better connected to the street grid, despite warnings of gridlock from transportation officials.
- Milwaukee removed the elevated segment of their waterfront Park East Freeway, replaced it with a surface boulevard, and catalyzed \$300 million in new waterfront economic development.
- Copenhagen planner/architect Jan Gehl described to Seattle leaders how their city steadily converted driving lanes to bike facilities and parking lots to public plazas over the past 20 years, eventually achieving a mode split of 1/3 driving, 1/3 transit, and 1/3 walking or biking throughout the city.
- Many politicians, citizens, and business leaders were strongly opposed to London's congestion pricing program. After it was implemented, transit and freight traffic now flows much more quickly, and 2/3 of those polled said mobility was as good or better with the new program.

Why Consider Transit + Streets First

Prudence

Invest public money wisely: The federal contribution for viaduct replacement of \$231 million is less than 8% of the project cost, and state gas taxes are largely distributed in proportion to where they were generated. This indicates funding for the Viaduct replacement is raised primarily from local and regional sources. There are many regional projects yet to be financed by these same voters: SR-520, Sound Transit 2, etc., totaling a \$30 billion backlog of transportation projects in the Puget Sound region. If a lower cost solution is feasible, billions could be made available for other transportation investments.

Minimize pain for local business: Extended megaproject construction will cause hardship for the 1200 businesses within a block of the viaduct. If there is a way to minimize this hardship for these businesses, and keep them alive without mitigation and litigation, it helps both the local economy and the tax base.

Plan ahead for resiliency: Two global situations raise deeper concerns about constructing an expensive segment of highway infrastructure on the shore: depleting oil supplies, and rising sea levels due to accelerated melting of polar ice sheets. What if gas prices double or triple in the next decades – how will that affect future demand for car trips? Would this significant investment in cars instead of transit help or hurt future economic independence from oil? What is the risk of sea levels rising dramatically (4' or 6' or 12'?) in the next 50 years, and how would a tunnel fare in these scenarios?

Potential benefits to assess

Land values and economic benefits: Removing this stretch of elevated highway reduces the visual and sound impacts of the existing Viaduct on adjacent property. Land values will be likely be enhanced to even a broader degree than with the tunnel because the benefit area is bigger, strengthening the city tax base.

Open space on the water: Removing this segment of highway altogether enhances the waterfront as a mixed-use activity center, city amenity, and regional / national tourist destination through providing public access and retail and recreational opportunities along the downtown shore.

Resonance with density goals: Opportunities to develop new housing downtown will likely be enhanced by the proximity to a waterfront park. Compact, family-friendly development is more likely near generous open space and recreation.

Remove safety risk sooner: Smaller, discrete projects can be designed and completed more quickly than a highway megaproject, allowing the damaged facility to be closed sooner and the decaying seawall to be repaired sooner.

Greener, simpler seawall: Uncoupling the seawall design from a tunnel design allows a habitat friendly seawall to be designed, improving the visibility and health of marine ecology in Elliott Bay.

Resonance with Kyoto goals: Investing in increasing transit convenience instead of car convenience provides a practical advancement of Seattle's goals to achieve the Kyoto Protocol through reducing auto trips.

Potential risks to assess

Car /freight convenience: The drive through downtown without the viaduct will likely take longer in the street grid. How much longer? Is it worth it?

State conflict: The state is so far refusing to consider not rebuilding this segment of highway. A political disagreement and conflict over funding will not be pleasant.

Leadership: This proposal, if pursued, requires significant change fairly quickly. Are elected officials and leaders committed enough to lead Seattle through such change?

Conclusion

Each of the discrete elements of the Transit + Streets First proposal has proven effective in other cities to improve mobility for people and freight. The cost of the proposal is likely significantly lower than the cost of building a new highway. Since SDOT is responsible to figure out how to provide mobility for the 2-4 years the viaduct will be closed to traffic, common sense strongly suggests those measures can be adapted into a

permanent solution. The potential benefits of this approach may be more resonant with Seattle's future goals for density, livability and sustainability than replacing this segment of highway.

We believe the Transit + Streets First proposal provides better answers to the questions of the present and future, as compared to repeating a choice from the past. If this is a 100-year decision, the choice we make today must address the broader set of questions.

Therefore, we suggest to City Council that the Transit + Streets First proposal:

- Deserves fair and professional feasibility analysis, cost/benefit analysis, and refinement by “best practitioner” professionals, independently commissioned to examine it objectively
- Deserves to be included on the November advisory ballot, given the potential benefits and growing local public support for the approach.

PEOPLE'S WATERFRONT COALITION

CITIZENS FOR A HIGHWAY-FREE SHORE

Transit + Streets First Frequently Asked Questions

Seattle's Alaskan Way Viaduct and downtown seawall were damaged by the February 2001 Nisqually earthquake. The Washington State Department of Transportation (WS-DOT) and City of Seattle examined five schemes to replace the Viaduct, only considering solutions that build a new segment of highway in the same location. WS-DOT, Mayor Nickels, and Seattle City Council selected the tunnel option as the preferred alternative, and preparation of the final Environmental Impact Statement (EIS) for this plan is underway.

The People's Waterfront Coalition advocates Seattle remove this segment of highway and not replace it with another. Instead we propose a reduced capacity, multimodal plan for mobility, where surface streets, transit, and I-5 are improved to accommodate these trips away from the shore. Our vision is a dynamic water's edge, with parks, beaches, recreation paths, event spaces, and an urban street integrated into a functional shore ecology.

DON'T WE NEED THAT HIGHWAY? WHERE WOULD TRAFFIC GO INSTEAD?

The Viaduct carries 105,000 vehicles per weekday in its busiest stretch. Roughly 40% of those trips exit SR-99 for destinations in downtown Seattle, and 60% bypass downtown.

Under the PWC's proposed plan, other parts of the system would be improved to shift trips to arterial streets, transit, and I-5 where there is unused capacity.

- Catalyze development to create **denser, more walkable neighborhoods**, making it easier to work, shop and play close to home —and car use will naturally decline.
- Connect existing **underused arterial streets** like Dexter Avenue, Sixth Avenue, and Airport Way to offer multiple choices for north/south routes for vehicles.
- Improve **traffic flow** through the downtown grid by timing traffic signals, repairing missing links, and untangling bottlenecks.
- Optimize **I-5** for through trips by fixing the "weaving" problems, keeping 3 lanes northbound, and potentially reconfiguring the express lanes.
- Build a **4-lane urban street** on the waterfront, the same width as Alaskan Way.
- Improve and coordinate light rail, future Bus Rapid Transit, streetcars and pedestrian ferries to improve **transit** convenience instead of driving.
- Invest in **freight priority lanes** on freight corridors to keep freight moving on surface streets and an improved I-5.

With our proposal, we estimate 50% of the trips will shift to other roads, 25% will take advantage of better transit, and 25% switch to local destinations or just don't happen.

WHAT ABOUT FREIGHT MOBILITY – HOW WILL TRUCKS GET AROUND?

While the Viaduct is a popular truck route between Seattle's two industrial areas, the actual number of daily freight trips is fairly low. Roughly 4,000 trucks use it daily, about 4% of the total trips. PWC proposes that Seattle invest in dedicated freight lanes on surface arterials and a reorganized I-5, and give trucks priority use of these lanes.

Keeping freight moving is important throughout Seattle, because the restaurants, stores, and businesses in EVERY neighborhood rely on efficient distribution. Through research of other cities, we've learned that investing in freight-only lanes and freight priority access on a surface network of truck routes is likely more cost-effective than investing multiple billions in a single route that only handles a fraction of total freight trips. Denser cities with bigger economies and fewer highway miles have solved the freight mobility problem. Given the high cost of new highways, Seattle should consider these cost-effective solutions too.

The Port of Seattle's container traffic doesn't depend on the Viaduct. 70% of the containers come and go by rail, and the remaining 30% traveling by truck are bound for I-5 and I-90 and local destinations south of the Port. The viability of this industry requires access to rail facilities and to I-5 and I-90, which can be achieved independent of the Viaduct question.

HOW CAN WE KNOW THE "TRANSIT + STREETS FIRST" SOLUTION WORKS?

We're advocating the City examine, test, and refine a Transit + Streets First option, so we all have accurate data for comparison. There are three reasons we are confident in it:

- Regional and city transportation planners with years of experience and specific knowledge about Seattle helped prepare -- and believe in -- this solution.
- Other cities have removed highways and reduced capacity successfully. Typically, highway planners say it won't work, and point to their computer models that predict gridlock. But each time they were wrong. In the real world, people prove to be a lot more flexible than computer models assume.
- Officials are proposing fixes to roads and transit so Seattle can get by without the Viaduct during construction. After we live without it for 2-4 years, we may well have already adjusted to life without it.

LOCAL POLITICIANS SAY WE NEED THE HIGHWAY. WHY DON'T YOU?

Because of irrefutable evidence of other cities achieving excellent mobility with less highway capacity per capita than Seattle. A comparison of highway miles vs. congestion in cities reveals that having more highways doesn't relieve traffic congestion, and having fewer doesn't necessarily worsen it. There is mounting evidence that urban highways actually contribute to congestion by enabling sprawl and long commutes, inducing car-dependent lifestyles, impairing flow in the street grid, and making places hostile to walkers and bikes.

Other cities have torn down urban highways, and are reaping significant benefits for their communities and economies -- without impairing mobility. Some leading transportation experts advise against any further investment in urban highways for practical reasons:

- Construction costs are nearly impossible to fund since Federal funding dried up
- Larger societal and environmental problems-- global warming, dependence on foreign oil, asthma and obesity public health epidemics -- are increasingly linked to car-dependent transportation/development patterns
- Several demographic and market trends, most significantly rising gas prices, indicate a future society that drives less.

A new report from the Victoria Transport Policy Institute concludes **"It may be better to anticipate these trends by investing in alternative modes and creating less automobile-dependent communities."**

Several great cities are a few steps ahead of Seattle in creating less car-dependent communities. Vancouver, San Francisco, and Portland have all prioritized investment in transit, freight, and bike and pedestrian infrastructure over cars. London's success with congestion pricing has inspired other cities to try aggressive disincentives to driving in their cores. Copenhagen has stealthily turned parking lots into parks and reclaimed car lanes for bikes over 20 years; now their residents choose the car for only 1/3 of the trips they take. These successes show that making non-car modes more viable for more trips can be part of an effective transportation system and healthy economy.

In a 1998 study of 60 actual cases of highway capacity reduction in various cities, researchers found that not one experienced long-term traffic chaos or gridlock, despite dire warnings from highway planners. The study found an average of 25% of the trips that had used the facility stopped happening when the road was removed. **With advance notice and identified alternative routes, people find other ways to get around.** Computer models don't show this, but real world evidence effectively proves it.

WHAT CAN SEATTLE LEARN FROM SAN FRANCISCO?

In San Francisco, two citizens' initiatives to remove the Embarcadero Freeway were both defeated, indicating a majority of citizens believed the highway department: they couldn't afford to lose that highway. When the 1989 earthquake took out the highway, they found out otherwise. City leaders decided to not replace all the lost capacity and use the opportunity to regenerate a healthy neighborhood on the water. There was no noticeable increase in congestion elsewhere; officials estimate that 40% of the car trips that had used the facility daily stopped happening. San Francisco enjoyed a strong economy for the following decade, attracting unprecedented development to this area. And they liked the results so much they tore down a second elevated highway, the Central Freeway, replacing it with a pedestrian friendly surface boulevard with about 50% of the vehicular capacity.

BUT THE STATE GOVERNMENT INSISTS ON BUILDING A NEW HIGHWAY.

We believe that WS-DOT is working toward a narrower goal than this opportunity demands. Their focus is to maintain the vehicular capacity on this facility, and they stated at the start of the project they would disallow other approaches. They have refused to consider a lower cost, reduced capacity solution because of this restriction. We believe this limitation is shortsighted, ignoring the public funding shortage, rising fuel prices, and our city's commitment to reduce car-dependence. We believe it's smarter to invest in better transit and a more robust street grid **now**, when there is so much to gain through reclaiming the downtown shore.

The City of Seattle owns the public land on which the highway sits, and has power to issue construction permits or not, so local officials do have some authority over what is built.

Citizens across the country have stopped construction of highways in their neighborhoods when they judged the costs to outweigh the benefits. Seattle citizens blocked several new highways in the 1970's -- not only to save their communities, but also to slow down the sprawl and increased congestion they rightly understood new highways would generate. Other cities have successfully adopted similar non-highway solutions, when faced with their own crumbling infrastructure and funding shortfalls. If we want to create a different future for Seattle's mobility, this is an important opportunity to invest wisely toward that vision.

Dismissal of the No-Replace Option: Does it Prove the Transit + Streets First Plan Can't Work?

Seattle City Council
Viaduct Committee of the Whole
April 24, 2006

WSDOT issued a report in September 2004 entitled "AWV No Replacement Concept" concluding a proposal they call the No Replace Option does not meet their criteria for replacing the viaduct's capacity, will not work, and will not be further considered. This report has been used to dismiss the Transit + Streets First proposal. We suggest there are five flaws in their analysis that cast doubt on its conclusions:

1. **Was it objective?** WSDOT stated at the beginning of the viaduct replacement planning process they would only consider solutions that replaced 100% of vehicular capacity with a new facility in this location. Prior to releasing the AWV No Replacement Concept report, WSDOT said it would not study the alternative because "the department and the legislature have already decided that any money spent to replace the viaduct must maintain or increase the amount of traffic that can travel through."¹
 - Given this restriction, was this agency well situated to constructively prepare a proposal that reduces capacity, reduces demand, and shifts trips to other modes?
 - The state's intention to maintain car capacity may conflict with some of Seattle's other intentions to reduce car dependence and vehicle emissions.
 - **Was this agency in a position to do an objective analysis?**
2. **Did it accurately reflect expected mode shifts?** The planning modeling tool WSDOT used to test the proposal has some deficiencies for predicting how future travel demand may respond to increased density and walkability, one of the core elements of the Transit + Streets First proposal. The downtown zoning changes and other initiatives underway by Seattle agencies intend to catalyze mode shifts to walk and bike modes, with the larger goal of making Seattle mobility less car-dependent. This model does not have the ability to predict how many trips will shift to non-vehicular modes as a result of increasing density and achieving better jobs/housing balance in neighborhoods. Instead, it assumes that all trips will continue to happen – either by SOV, HOV, or transit. **Real world evidence, and stated objectives of the land-use planning changes underway, indicate this prediction is inaccurate.**
3. **Did it accurately reflect trip generation changes?** Development patterns will likely change over time in response to the removal of a facility, which greatly alters future trip

¹ Seattle PI 8/2/04 "City wrestles with viaduct replacement"

generation scenarios. This analysis did not create a new travel demand scenario for a future without the viaduct, but assumed the same trip generation and same demand. According to an article in the Institute of Transportation Engineers journal **“Assuming that land use patterns are fixed, regardless of transportation infrastructure decisions, leads to substantial errors in the evaluation of transportation projects.”**²

4. **Did it accurately reflect reasonable behavioral response?** Existence of a transportation facility is well understood to generate a certain amount of travel demand. If the capacity of a facility is reduced, and citizens are given advance notice, studies indicate trip demand will likely be reduced by an average of 25%. This may be reasonable to assume in Seattle. It may also be reasonable to assume increasing gas prices will alter individual travel choices. WSDOT’s analysis assumed no reduction in demand, assuming that travel behavior would not change in response to increased travel times, and no trip would be dropped no matter how inconvenient or expensive it became. In the real world, individual choices about travel have proven to be more adaptive to changing conditions. **Ignoring this possibility likely exaggerates demand and predictions of congestion.**
5. **Does the No Replacement Concept studied reflect the Transit + Streets First proposal?** Many elements of the Transit + Streets First proposal were left out of the No Replace Option that WSDOT studied. For instance, no investments were included to improve freight mobility. No incentives to reduce demand for car trips were tested at all: tolls, bus passes, parking taxes, parking cash out, etc. Modeling results did not sense benefits of any improvements to make better use of existing but underutilized capacity in the street grid. **Without constructive, iterative exploration of all the strategies, dismissal may be premature.**

WSDOT’s study presents its conclusion of severe congestion as if it were fact. If this were a “fact”, then:

- How was it possible for other cities to successfully remove segments of highways and replace them with reduced capacity surface boulevards, like the Embarcadero and Octavia Boulevard in San Francisco, McKinley Boulevard in Milwaukee, and the Chattanooga Riverfront Parkway in Chattanooga without causing gridlock?
- How will it be possible for Seattle DOT to keep Seattle mobile for 2-4 years without the viaduct when it is closed for construction?

Traffic models are far from infallible. Because the future is unknowable, and dependent on many complex forces, conclusions from traffic models need to be understood as predictions drawn from an analysis with many embedded assumptions. This particular analysis may have had several deficiencies. According to Stuart Ramsey, “As presently implemented, transportation planning models can produce results that are so misleading that, in many cases, we would be better off not using them at all.”³

² Stuart Ramsey, P. Eng, “Of Mice and Elephants” ITE Journal, September 2005

³ Stuart Ramsey, P. Eng, “Of Mice and Elephants”, ITE Journal, September 2005